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1 Introduction

It remains commonplace in work on the semantics of definiteness (e.g. Abbott, 2004; Poesio, 2004) to talk of an ongoing debate: is the key feature of this category uniqueness (after Russell, 1905) or familiarity/identifiability (after Christophersen, 1939; Heim, 1983, 1988)? The main contention of this article is that this debate has in fact long been redundant: in his (1978) book and (1991) article Hawkins gives a characterization of definiteness based on uniqueness (and only indirectly involving familiarity/identifiability) which, although imperfectly formulated, ought to have put this debate to rest.

Hawkins' work on definiteness is widely cited, but typically only as one of many more or less inadequate approaches to this issue. There are several likely reasons for this lack of appreciation. First of all, the basic insight – that the essence of definiteness crucially involves pragmatic inferencing – will be unpalatable to those who continue to deny a role for pragmatics in establishing the literal content of an utterance ('what is said'; see Löbner, 1985 for a prominent approach to definiteness in this tradition, and Lucas, 2011 for a critical discussion thereof). I will assume here without further discussion that inference plays a key role in establishing what is said (see, e.g., Récanati, 1994 for a discussion of the relevant issues). Second, there are various potentially distracting inconsistencies in the terms in which Hawkins expresses his theory, and several of the key concepts are given intuitive characterizations rather than clear definitions. Third, there is the matter of perceived counterexamples to this and all theories of definiteness which attempt to reduce the phenomenon to just uniqueness or just familiarity/identifiability.

Against this background, this article has two main aims. The first is to show that Hawkins' approach is fundamentally on the right track, but that it is best formulated in consistently relevance-theoretic and, in particular, procedural-encoding terms (Blakemore, 1987, 2002; Sperber & Wilson, 1995), and that relevance theory provides the appropriate tools for supplying the missing definitions of some of the key concepts. The second aim is to defend this procedural version of Hawkins' theory from a commonly cited class of apparent counterexamples, which I will argue are simply one particular manifestation of the wider phenomenon of presupposition failure with accommodation. As we will see, a significant advantage of an approach to definiteness based on procedural encoding is that it gives us a basis for explaining why accommodation is possible (and commonplace) in some contexts and rare or impossible in others.

The article is structured as follows. Section 2 gives a brief overview of previous approaches to definiteness. Section 3 first outlines the major usage types of definite NPs and presents Hawkins' theory, and then shows how, suitably revised, this theory can account for all of these uses. Section 4 applies the theory to cases of presupposition failure with accommodation. Section 5 concludes the article.

2 The background to uniqueness and familiarity/identifiability

As is well known, work on the semantics of definite noun phrases (NPs) in the modern era begins with Russell (1905). Russell examined sentences such as:

(1) *The king of France* is bald.

He concluded that sentences such as these, in which a denoting expression of the form 'the *F*' (called a 'definite description' in the philosophical literature) appears as grammatical subject, are misleading as to their logical form. This he analysed as a conjunction of three propositions:

(i) $\exists x \, (koF(x))$

(ii) $\forall y \, (koF(y) \rightarrow y = x)$
(iii) $Bald(x)$

These propositions express an existential claim in (i), a uniqueness claim in (ii) and a predication claim in (iii), and can be paraphrased as follows:

(i`)   There is at least one king of France.
(ii`) There is at most one king of France.
(iii`) This entity is bald.

Russell claimed that, in asserting (1), a speaker asserts all three of these propositions conjoined, and that therefore, if any of them is false then the whole conjunction is false. Thus, for example, if one were to assert (1) in 2011, this would be a false statement, since the existential claim in (i) is (at present) false. The influence of Russell's theory of descriptions has been long-lasting: a prominent recent defence is Neale (1990).

The theory has not been without its critics, however. One of the better known is Strawson (1950, 1952). Strawson's principal objection had to do with the logical status of the existential and uniqueness claims. Strawson suggested that when a speaker utters (1) it is only, in fact, the predication claim in (iii) that she asserts.[1] The first two conjuncts of Russell's analysis, he argued, are merely presupposed in an utterance of the sentence in (1). We return to this point shortly.

The first major work to suggest that familiarity or identifiability, rather than uniqueness, lies at the heart of definiteness is Christophersen's (1939, p. 28):

> "Now the speaker must always be supposed to know which individual he is thinking of; the interesting thing is that the *the*-form supposes that the addressee knows it too. For the proper use of the form it is necessary that it should call up in the addressee's mind the image of the exact individual that the speaker is thinking of."

This shared knowledge on the part of speaker and addressee Christophersen characterizes as mutual familiarity, but he himself recognises that the term 'familiarity' does not always seem the right one in describing many felicitous uses of the definite article, and that "it is often only indirectly that one is familiar with what is denoted by a word" (1939, p. 73). He gives the following example, in which, talking about a certain book, we might say:

(2) *The author* is unknown.

Part of understanding the meaning of the predicate 'unknown' in this sentence is knowing that neither speaker nor addressee can possibly be familiar with the referent

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[1] Following the common convention, throughout this article I refer to the speaker of an utterance as female and the addressee as male.

of 'the author'. However, what is certainly true is that there exists an "unambiguous relation" (Christophersen, 1939, p. 73) between a book and its author, and this relation must be familiar to both speaker and addressee for such a use of a definite description to be felicitous. Hawkins (1978, p. 123) calls this an "associative relationship".[2] He gives the following examples:

(3) The man drove past our house in *a car*. *The exhaust fumes* were terrible.
(4) The man drove past our house in *a car*. *The dog* was barking furiously.

In (3) you have what Hawkins calls an 'associative anaphoric use' of a definite description. 'The dog' in (4), by contrast, cannot be interpreted in this way. For this sentence to be uttered felicitously the addressee must be familiar (in the ordinary sense) with the referent of 'the dog', or else it must have been mentioned previously in the discourse. Hawkins' explanation for this phenomenon is as follows:

> "…even though dogs often travel in cars, and though birds often make their nests under house roofs etc., neither *a car: the dog*, nor *a house: the bird's nest* are possible association sequences. Either these associates are not part of the relevant domains with sufficient generality, or else, even if they are part of some domain, they are not somehow considered to constitute an important enough part." (Hawkins, 1978, p. 124)

He goes on to point out that one could imagine a world in which car owners regularly kept dogs in their cars as a security measure. In such a world 'the dog' in (4) would represent a perfectly acceptable associative anaphoric use. Similarly, one could imagine a world in which cars no longer emitted any exhaust fumes, in which case *a car: the exhaust fumes* would no longer be a possible association sequence, and *the exhaust fumes* in (3) could only refer to some other entity not connected with the car, but which the addressee could identify.

A more recent account also based on the concept of familiarity is Heim's (1983) file-change semantics, though the familiarity here is with a discourse referent (in the sense of Karttunen, 1976). The focus on discourse represents a significant advance over Christophersen's theory in that it allows Heim to account for many felicitous uses of definite NPs whose referents cannot be familiar to the addressee because their reference is non-specific. Take the following for example:

(5) If I had *a gun* right now, I'd use *it*.

The NP *a gun* in (5) clearly does not refer to any particular gun, and yet the pronoun *it*, which is inherently definite, is in an (entirely felicitous) anaphoric relationship with it. Heim's account of this phenomenon is as follows. Addressees make sense of discourse by keeping a 'file' which contains separate 'cards' for each discourse referent. In (5) the indefinite NP *a gun* introduces a new discourse referent which requires the addressee to create for it a new card. This card is then updated in the course of the discourse every time a definite description or any definite NP (such as *it* in (5)) occurs in an anaphoric relationship with that discourse referent.

However, despite its advantages, Heim's approach cannot account for all felicitous uses of definite NPs. An utterance of (6), for example, is perfectly felicitous

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[2] Elsewhere this phenomenon tends to be known as 'bridging' (see Clark & Haviland, 1977; Clark & Marshall, 1981), but I retain Hawkins' terminology here.

in a context in which the 'front page' in question is both discourse-new and addressee-new (in the sense of Prince, 1981).

(6)   There was a funny story on *the front page of the Guardian* this morning.

In such a context there would be no existing file card under Heim's system for the definite NP *the front page* to update, nor is it related to such a card by an associative relationship.

It should be clear from this brief overview of previous approaches that both uniqueness and familiarity/identifiability are relevant to the meaning of definiteness, but that familiarity or identifiability alone cannot be sufficient.[3] As we will see, Hawkins' account, which we turn to in the following section, takes uniqueness as the essence of definiteness, with identifiability only partially retained in terms of the notion of mutual manifestness.

3 Hawkins on definiteness

A particular advantage over previous (and subsequent) treatments of definiteness that Hawkins' (1978) work has is its concern for empirical coverage. The theory presented in this work (and developed in Hawkins, 1991) emerges naturally out of (what Hawkins claims to be) "an exhaustive look at usage possibilities" of the definite and indefinite articles (Hawkins, 1978, p. 90). This is in marked distinction to the approaches detailed in the previous section, which come in for detailed criticism in Hawkins (1978). His critique of Russell's approach is the most instructive for present purposes.

3.1 Hawkins on Russell

Hawkins identifies three principal defects of Russell's theory of descriptions. First, he echoes Strawson's (1950, p. 234) objection concerning the logical status of the existential and uniqueness claims: Russell's assertion that (1) is false if uttered in a context in which there is no king of France simply doesn't correspond with typical native-speaker intuitions. If some property is falsely predicated of a familiar, real-life entity – as in (7) – then we are happy to say that the statement is false in this context.

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[3] Birner & Ward (1994) suggest that familiarity/identifiability is neither a necessary nor a sufficient condition for definiteness marking, which certainly seems correct, and that uniqueness is a sufficient, but not a necessary condition, pointing to examples similar to those in (i) and (ii).

(i) I'm going to Dublin for the first time next week. I intend to spend most of my time there in *the pub*.
(ii) He then came to *the bank of a river*.

It is certainly the case that there is no suggestion of uniqueness in either of the definite-marked NPs in these examples, but neither can their referents be in any sense familiar or identifiable to the addressee. They are thus problematic for any theory of definiteness based on either of these concepts, raising the possibility that the presence of the form *the* in examples such as these is a fossil which does not in fact mark these NPs as semantically definite, just as in, for example, the comparative correlative construction (e.g., *the more*, *the merrier*), or generics, where definiteness and indefiniteness marking are largely interchangeable. See Carlson, Sussman, Klein, & Tanenhaus (2006) and Lucas (2011) for further discussion of these so-called 'weak definites'.

(7) *The queen of England* is bald.

However, many would be unwilling to say that an assertion now of the sentence in (8) is false, on an ordinary understanding of this term:

(8) *The president of England* is bald.

(8) is certainly grammatically well-formed and clearly meaningful; but it does not seem to express a comprehensible proposition, and it is for this reason that we are reluctant to describe it as false. We understand 'the president of England' as a referring expression with no referent and as such have no proposition about which to make a judgment (see Glanzberg, 2003 for further elucidation of this point).

Hawkins' second criticism is closely linked to the first. It is not only the logical status of the existential and uniqueness claims that Russell exaggerates, but also their illocutionary status. Following Searle (1969), Hawkins argues that to insist that the existential/uniqueness claims are *assertions* of a sentence containing a definite description, "is to confuse the assertion of existence and uniqueness […] with what it is to refer to a unique and existing object in natural language" (1978, p. 95). This reformulation in speech act terms certainly seems to accord better with a common-sense view of what it is that one actually asserts in uttering a definite description-containing sentence, and what one refers to in making the assertion. It is also much more amenable to a broadly Gricean notion of what is said by an utterance.[4] To illustrate this point, consider (9):

(9) Queen Elizabeth II of England is bald.

To the untrained eye, (9) looks very similar to (7): the referent of the subject term is the same, and the predicate is identical. We can agree that what is said by an utterance of (9) is a simple proposition consisting of a one-place predicate and its argument:

(10) Bald(e)

However, it seems perverse for Russellians to insist that the proposition expressed by an utterance of (7), which serves to predicate the same property of the same entity, is in fact the conjunction of three propositions as given above.

The third defect of Russell's theory that Hawkins highlights is its incompleteness:

> "There is simply much more to the meaning of the definite article than Russell allows for. For example, Russell is concerned almost exclusively with the definite article before singular count nouns. And yet mass nouns and plurals, which scarcely refer to unique individuals, seem to take a definite article under basically similar circumstances to singular count nouns. In addition, pragmatic aspects of meaning [such as how the reference of incomplete descriptions is narrowed down in context] are wholly neglected…" (Hawkins, 1978, p. 96)

While this criticism seems entirely justified as it relates to Russell's own formulation of the theory of descriptions, the theory is clearly capable of being extended to cope

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[4] This is not to imply that Grice himself took this view. On the contrary, Grice (1969) argues (not necessarily conclusively) for a standard Russellian analysis of what is said in definite description-containing sentences.

with plural definite descriptions (see Neale, 1990, pp. 45–47). Whether the theory so extended is the best analysis of the linguistic facts is another matter. Let us therefore turn to Hawkins' investigation of definite NPs and the theory he proposes.

3.2 Hawkins' own approach

As already noted, a major benefit of Hawkins' work on definiteness, in addition to his theory of its meaning, is his meticulous presentation of the major usage types of definite NPs, out of which his theory develops as a unified account of the necessary and sufficient conditions for all of these usage types. In this same spirit, let us first briefly look at the six major usage types that Hawkins (1978) identifies, before moving on to the theory itself and how, suitably revised, it can explain each of these usage types.

3.2.1 The major usage types of definite NPs

I. Anaphoric uses

These are often seen as the most basic uses of definite NPs, though they are further analysable into more and less straightforward varieties:

(11) I saw *an odd-looking bird* in the garden yesterday. I looked *the bird* up in my guide this morning.
(12) *My car* broke down again today. *The stupid thing* is always giving me trouble.

In (11) we have a first-mention indefinite NP − *an odd-looking bird* − in the first sentence, licensing a definite NP *the bird* as a second mention of the same referent. In (12) we have the same process, except here we see that there is no necessity for the definite NP used anaphorically to have any of the same constituents as the first-mention NP.

II. Immediate situation uses

These uses are where definite reference to some entity is licensed by the fact of its being detectable in the immediate physical situation of both speaker and addressee, as in the (13), said by a surgeon to a nurse in an operating theatre:

(13)   Pass me *the scalpel*.

III. Larger situation uses

The third major usage type involves first-mention uses of definite NPs that are licensed either by specific shared knowledge on the part of speaker and addressee, or by general knowledge of various situations as to what objects they contain. Examples of the latter, such as (14), are very commonplace.

(14)   *The mayor of London* is a rather dubious figure.

As an illustration of the former, suppose I live in a village close to a lake where people often go to bathe. Seeing it is a sunny day, I call up a friend from the village and ask,

(15)   Do you fancy going to *the lake* today?

It is the shared specific knowledge between my friend and me of our larger situation, namely that it contains a lake that people often visit, which allows me to refer to this lake with a first-mention definite NP.

IV. Associative anaphoric uses

These are essentially a combination of usage types *I* and *III*. We have already had an example of such a use in (3):

(3)   A man drove past our house in *a car*. *The exhaust fumes* were terrible.

Hawkins terms the first NP in uses such as these ('a car' in this example) 'the trigger', because it licenses subsequent definite reference to a whole range of associated entities ('the associates'). For example, after 'a car', I could equally felicitously refer to 'the steering wheel', 'the engine', 'the seats' etc. It is, of course, general knowledge that cars tend to contain or be associated with such objects. Hawkins characterizes the relationship between the associative anaphoric use and the larger situation use as follows:

> "The trigger in the larger situation use is not an NP, but the situation of utterance itself. Otherwise, these two uses are the same. The range of associates which can have a first-mention *the* after a previous mention of [e.g. *a car*] is precisely the set which the speaker can refer to with a first-mention *the* when he is [in a car]. In these latter cases the situation triggers off the associations, whereas in the former cases of associative anaphora it is some linguistic referent which acts as trigger." (Hawkins, 1978, p. 125)

V. 'Unfamiliar' uses

These are uses, such as in (6) above, which are not situational (i.e. uses *II-III*), not associates triggered by a previous discourse item (use *IV*), and are not characterized by shared knowledge of the referent on the part of speaker and addressee due to previous mention (use *I*) (Hawkins, 1978, p. 130). Unfamiliar uses come in several varieties. One such is where both the trigger and the associate in an associative anaphoric sequence come together in a genitival relationship, with the associate preceding the trigger. Hawkins (1978, p. 139) gives the examples in (6) (repeated here as (16)) and (17).

(16)   There was a funny story on *the front page of the Guardian* this morning.
(17)   I remember *the beginning of the war* very well.

   Two further varieties of the unfamiliar use are what Hawkins calls the 'NP-complement use' and the 'nominal modifier use' (exemplified in (18) and (19) respectively):

(18)   *The notion that pigs can fly* is absurd.
(19)   Today's show was brought to you by *the letter 'C'* and *the number four*.

VI. 'Unexplanatory modifiers'

The final major usage type is that involving a class of modifiers which have the property of making the definiteness-marking obligatory in any NP in which they appear:

(20)   Every year we go to *the same place* on holiday.
(21)   *The centre of a star* is unimaginably hot.
(22)   *The nicest people in my class* have all left.

Making these descriptions indefinite renders them ungrammatical or at least strongly infelicitous: **a centre of a star*, **a same place*, **some nicest people in my class*. Note that all superlatives belong to this class of modifiers.

3.2.2 P-sets and uniqueness/inclusiveness

How, then, are we to account for all of these usage possibilities in a unified fashion? Hawkins' (1991, p. 414) summarizes his proposal as follows:

(23)   "*The* conventionally implicates that there is some subset of entities, {P}, in the universe of discourse which is mutually manifest to speaker and addressee on-line and within which definite referents exist and are unique."

The term 'mutually manifest' (henceforth MM) is of course due to Sperber and Wilson, who define it as follows (1986, pp. 39–42): "A fact [or an assumption] is *manifest* to an individual at a given time if and only if he is capable at that time of representing it mentally and accepting its representation as true or probably true". If two or more individuals share a set of facts or assumptions, and it is manifest to each of them that they share them, then these facts or assumptions are MM.

The essence of Hawkins claim, then, is that the use of a definite NP by the speaker is an indication to the addressee that a unique referent for that NP is to be found in some MM set of objects (henceforth 'P-set'). This proves to be the most satisfactory characterization of the meaning of definiteness to date, and one which is capable of explaining all the above usage types, as we will see shortly.

As noted in section 1, however, a shortcoming of Hawkins' work is that he fails to give precise definitions of some of the basic concepts underlying this theory. Most notably, we are never told exactly what constitutes a P-set. Instead he illustrates what is an intuitively straightforward notion by means of examples connected with the major usage types of definite NPs presented above. For instance, in arriving at an interpretation of an utterance containing an anaphoric use of a definite NP as in (11) above, one P-set which will become particularly relevant for the addressee in this context is the 'previous discourse set' associated with the conversation of which the utterance is a part. This consists of the set of entities that the speaker and addressee have referred to in the course of a given discourse (Hawkins, 1991, p. 408). So in

(11), mention of *an odd-looking bird* results in the entity[5] this description refers to being added to the MM previous discourse set, such that when the same entity is referred to later on in the utterance by means of the definite NP *the bird*, it is uniquely locatable in this P-set. Other P-sets will be comprised of the sets of entities which are MM to speaker and addressee in their immediate situation, their larger situation, or sets of entities which are (MM-ly) in associative relationships with one another.

This picture is reasonable as far as it goes, but we can give a more general characterization of what is meant by a P-set. The P-set can be thought of as constituting a subset of the set of assumptions and entities MM to speaker and addressee at the moment of a given utterance. In addition to their MM-ness in general, it will furthermore be MM that the assumptions and entities which make up that subset have some property in common, such that they form a (MM-ly) natural class. This property might, for instance, take the form of an associative relationship, as in 'a car': 'the exhaust fumes' in (3); or it could be membership of the set of entities associated by general or local knowledge with the situation of utterance, as in (14)–(15), or the entities making up the previous discourse set, and so on. On this characterization there will be indefinitely many P-sets, with a range of different organizational principles, potentially accessible at a given time; but the purpose of a speaker and addressee's accessing one in particular is to secure reference to the entity picked out by a definite NP. It is the task of the addressee to access the same P-set as the speaker, such that the entity referred to by the speaker in using the definite NP is the only entity in that P-set which fits the descriptive content of the NP in question.

Just how the addressee achieves this task can be explained in relevance-theoretic terms (see Wilson, 1992 for a parallel account of reference in general). Of central concern here is the Communicative Principle of Relevance (Sperber & Wilson, 1995, p. 260), "every act of ostensive communication communicates a presumption of its own optimal relevance", where relevance itself is defined in terms of two extent conditions (Sperber & Wilson 1995, pp. 265–266):

(24) *Relevance of a phenomenon*
Extent condition 1: A phenomenon is relevant to an individual to the extent that the positive cognitive effects achieved when it is optimally processed are large.
Extent condition 2: A phenomenon is relevant to an individual to the extent that the effort required to process it optimally is small.

Following the Communicative Principle, the addressee should assume that the appropriate P-set for a given definite NP can be accessed with minimal cognitive effort (given the interlocutors' mutual cognitive environment and the form of the speaker's utterance). At the same time, he should assume that accessing the appropriate P-set, and processing its unique token of the appropriate referent-type, will generate significant positive cognitive effects.

More specifically, it is a general consequence of the Communicative Principle that the intended interpretation of an utterance is not necessarily identical to whichever interpretation happens to be most immediately accessible to the addressee at a given

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[5] For the sake of brevity I will generally talk in terms of reference to entities, though this should not be understood as a commitment to a denotational view of reference. Any talk of reference to entities in this article should be taken as an abbreviation for the representational view that words (or people) refer to entities not directly, but via concepts of those entities, and that therefore, trivially, it is not entities themselves which are entered into P-sets but the concepts and assumptions which represent them.

moment: an utterance is relevant to the extent that it gives rise to an optimal balance between minimal processing effort on the one hand, and maximal positive contextual effects on the other. It follows, therefore, that that the appropriate P-set/referent pair for an addressee to select in processing a definite NP will not simply be the most accessible such pair at the moment of utterance. Rather, an appropriate comprehension procedure consistent with the Communicative Principle entails scanning candidate P-sets in order of accessibility until one is found containing a unique referent of the required sort, such that the proposition featuring this referent satisfies the addressee's expectations of relevance (cf. Wilson & Sperber, 2004, p.613). Only at this point can the addressee assume that he has recovered the P-set/referent pair intended by the speaker.

Turning to the precise meaning of uniqueness, this is something which Hawkins does deal with explicitly. In his (1978) book, building on his criticism of Russell's theory for concentrating on singular count nouns, he proposes the term 'inclusiveness' instead of uniqueness, in order to characterize how definite NPs containing singular, plural and non-count nouns refer. In so doing he argues for an analysis of the definite article as a universal quantifier, albeit one that operates within the scope of the relevant P-set (1978, pp. 160–161).[6] Such an analysis allows for a unified theory of all definite descriptions and captures the regularities in the appropriateness conditions for plurals and mass nouns as well as singulars: a trigger such as 'a hotel' licenses definite reference to 'the receptionists'; 'the lake' to 'the water'; and in each case the description refers to the totality of referents fitting that description within the appropriate P-set (i.e. *all* of the water, and *all* of the receptionists). The crucial point is that this analysis captures the unique reference associated with singular count nouns as well: reference is still to the totality of referents fitting the description within the appropriate P-set – it just happens that in these cases it is a totality consisting of one member. In his (1991) article Hawkins abandons the term 'inclusiveness' and reverts to the more traditional term 'uniqueness', a purely terminological move which we will follow here.

In addition to a certain vagueness in the definition of its key concepts, there is a perhaps more serious difficulty with the terms in which Hawkins cashes out his theory, particularly in its (1991) manifestation. Most notable is his division of the meaning of definiteness into its "logical meaning", which he says, oddly, given his earlier critique of Russell, is "existence and uniqueness" (1991, p. 410), and the conventional implicature in (23). Presumably on the analogy of a Gricean analysis of a word such as *but*,[7] Hawkins feels obliged to divide the meaning of definiteness into its semantic and pragmatic elements, in some sense of those terms. But there is an evident redundancy in this approach, given that the 'existence and uniqueness' aspect of the 'logical meaning' is repeated in the conventional implicature in (23). Moreover, the force of Hawkins' (1978, p. 95) abovementioned arguments against seeing existence as part of the encoded meaning of definiteness remain: the assumption that a referent exists for a definite description or any other denoting phrase is, *ceteris paribus*, warranted by the Communicative Principle as soon as that phrase is used in an utterance (cf. Simons, 2005, p. 337). There is no good reason to suppose that definiteness marking encodes an actual assertion of existence.

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[6] Hawkins later dropped this claim (1991, p. 409), arguably rightly so. In any case, one can retain the uniqueness element of Hawkins' theory without cashing it out in terms of universal quantification.

[7] In which *but* is taken to be equivalent to logical conjunction in its 'logical meaning' and also to carry a conventional implicature to the effect that there is an apparent opposition between the propositions expressed in the two conjuncts (see Grice, 1989).

What I want to argue instead is that, having taken one important idea from relevance theory – mutual manifestness – Hawkins would have done better to express the meaning of definiteness in terms of another, namely Blakemore's (1987, 1990, 1997) concept of procedural meaning. The essence of Hawkins' theory is entirely procedural in any case – definiteness as a constraint on the inferential processes required for reference assignment – and a reformulation of his theory in procedural terms can capture his key insight more efficiently. Clearly, the definiteness-marking element of a definite NP contributes nothing conceptual to the meaning of that phrase, so there is no need to give it a 'logical' semantics and a 'conventional' pragmatics. We can say instead that:

(25) The [+definite] status of a definite NP encodes a procedure indicating to the addressee that the referent of that NP is unique within some MM subset of assumptions and entities, {P}.

On this formulation the addressee of an utterance containing a basic use of a definite NP, such as (26) (=(11)), will assign reference to that phrase as follows.

(26) I saw *an odd-looking bird* in the garden yesterday. I looked *the bird* up in my guide this morning.

The bird encodes both conceptual and procedural information. The conceptual information is, roughly, that something compatible with the notion of birdhood is being referred to here. The procedural information is encoded by the definiteness marking and indicates that the referent of this NP is to be found in some P-set that is MM to speaker and addressee at the moment of the utterance, and within which that referent is the only entity compatible with the notion of birdhood.[8] In this instance, the appropriate P-set is the set of referents in the previous discourse of the interlocutors. In this set both the speaker and addressee will have a single concept each representing the bird in question. The procedural information encoded by the definiteness marking in *the bird* gives the addressee sufficient grounds for assuming that this is the concept being referred to by the speaker.

All the other usage types of definiteness marking outlined in section 3.2.1 can be captured by (25) in similar fashion.

For immediate situation uses as in (13) the appropriate P-set is simply the set of objects MM in the immediate situation of the interlocutors. The referent of *the scalpel* is then necessarily unique within this P-set (and in a context where this does not hold, definiteness marking in (13) is not felicitous).

The relevant P-set in larger situation uses as in (15) is the set of objects which MM-ly belong to the larger situation shared by the interlocutors. For instance, in (15) two inhabitants of the same village can talk about 'the lake' as a first mention because the larger situation they share – i.e. the relevant MM P-set in this instance – includes the set of MM entities in the village and its immediate surroundings, and in this situation there is a unique lake. Again, if there had been two lakes near the village equally good for swimming in, then a larger situation use would not have been possible here.

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[8] Strictly speaking: the only entity such that reference to it by means of the predicate 'bird' is consistent with the presumption of optimal relevance.

As we have seen, general knowledge larger situation uses, as in (14), and associative anaphoric uses, as in (3), resemble one another closely. In the former the relevant P-set is the set of entities MM-ly associated by general knowledge to the situation of utterance. It is general knowledge (for a certain subset interlocutors) that there is a single mayor of London, and this is what licenses definiteness marking in (14). With associative anaphoric uses the relevant P-set is the set of entities MM-ly associated by general knowledge, not to the situation of utterance but to the trigger. So in (3) the relevant P-set is the set of associates of 'a car', within which there is a unique referent of 'the exhaust fumes' (i.e. reference is to the unique maximal set of exhaust fumes within the P-set – the speaker is not talking about only some of the fumes).

Unfamiliar genitival uses, as in (16) and (17), involve a P-set which is identical to that of the ordinary associative anaphoric use – the set of entities MM-ly associated by general knowledge to the trigger. The fact that the associate precedes the trigger in this use is unimportant in this regard, except that if the trigger is not forthcoming then the definite NPs (*the front page* and *the beginning* in (16) and (17), respectively) cease to be felicitous unless a unique referent for them can be found in the previous discourse P-set. The NP-complement and the nominal modifier varieties of unfamiliar use (exemplified in (18) and (19)) are also straightforward – the definite NP here simply functions to clarify the reference of the following item and to signal that it is being mentioned rather than used. As such, the P-set is entirely determinate. For a description such as 'the notion that pigs can fly', as in (18), the relevant P-set is the set of entities corresponding to the proposition 'pigs can fly', which is necessarily a singleton set; hence the referent is necessarily unique within that P-set.

Finally, unexplanatory modifier uses, as in (20)–(22), also function similarly. For example, in (21) there is no set of entities in which one could point to any member with more than one centre. This kind of idea is part of the meaning of words such as 'centre' or 'top', or any superlative adjective, which all carry an 'inherent uniqueness claim' (Hawkins, 1991, p. 420; Löbner, 1985 calls nouns of this type 'functional nouns'). So for any P-set at all in fact, the assumption that any object within that P-set will have a unique centre is MM to the interlocutors. Hence, use of the definite article with such modifiers is obligatory and the indefinite article ungrammatical or very odd. Similarly, regarding (20), there is no set of entities in which one could point to two subsets of entities which are 'the same', and it be less than the unique maximal set of each of these subsets which satisfy this predicate. So, again, it is a direct consequence of the meaning of the modifier/predicate 'same' that it can only grammatically co-occur with the definite article.

This concludes the discussion of Hawkins' theory of definiteness. I hope to have shown that this fundamentally pragmatic approach, developed and reformulated here in relevance-theoretic and procedural terms, captures the essence of what definite reference entails and is capable, unlike any previous theories, of giving a unified account of all of the major usage types of definite NPs. In the following section we consider a class of apparent counterexamples, which in fact turn out to offer further support for the procedural theory defended here.

4 P-set presupposition failure and the limits of accommodation

Consider the following sentences, uttered discourse-initially:

(27) Have you heard *the news*?!
(28) I have *some news* to tell you.

Typically, the function of both of these utterances will be to alert the addressee to the fact that the hearer has some information to impart, of which she assumes the addressee is unaware. The indefinite *some news* in (28), which encodes nothing to suggest that the addressee should be aware of the news in question, is clearly suited to this function. According to the theory of definiteness presented in the preceding sections, however, the definiteness marking in *the news* in (27) encodes the information that speaker and addressee share a MM P-set in which there is a unique referent for this description. How then can (27) serve to introduce information which is assumed to be completely unknown to the addressee? To understand this, consider two possible answers to the question in (27):

(29) a. Yes.
     b. What news?

The answer in (29)a takes the question in (27) at face value: the addressee finds that there is indeed a MM P-set (roughly, the set of propositions which can be assumed to be general knowledge at the moment of utterance) in which there is a unique referent for *the news* (presumably information about some event so momentous that in comparison no other piece of new information merits the predicate 'news'). Intuitively, however, (29)a is an unusual and rather uncooperative answer to the question in (27). A more typical and more cooperative answer would be something like (29)b. But (29)b is not an answer to the question as formulated. It is a clarification question indicating that the addressee is unable to answer the question as formulated, because he cannot find an appropriate referent for *the news*. That is, the P-set in which the appropriate referent is unique is not manifest to the addressee and was therefore, strictly speaking, wrongly treated as MM by the speaker when she referred to it with a definite NP. In terms of the speaker's ultimate rhetorical aims, however, the addressee's response in (29)b is the desired outcome; because in formulating her utterance as in (27) she was not, despite superficial appearances, primarily seeking information about what the addressee does and doesn't know; rather she was announcing her intention to impart some information, and seeking a response from the addressee which invites her to do so. The addressee's question in (29)b clearly constitutes such an invitation.

This example illustrates two important points. The first is that speakers are routinely able to misrepresent the mutual cognitive environment (or 'common ground') of the interlocutors for specific rhetorical aims. The second is that where this kind of misrepresentation involves strictly-speaking inappropriate definiteness marking, it is only with the aid of a procedural theory of definiteness, taking into account the mutual cognitive environment of the interlocutors, that we can properly understand both the nature of this misrepresentation and its rhetorical consequences.

In the example in (27) and (29)b there is presupposition failure without accommodation, but communication is successful nevertheless because the presupposition failure was intended by the speaker. Perhaps more common are cases where there is presupposition failure (intended or otherwise) but the utterance succeeds because, to borrow a phrase from von Fintel (2008), the addressee is able "quietly and without fuss" to adjust the mutual cognitive environment appropriately after the fact. Consider (30), uttered by one fourteen-year-old boy to another:

(30) I can't play computer games with you tonight. I'm taking *my girlfriend* on a date.

Leaving aside for the moment considerations of definiteness and uniqueness, an utterance of (30) containing the possessive pronoun *my* presupposes the MM-ness of the assumption that the speaker has a girlfriend. If this assumption is not manifest to the addressee then there is presupposition failure and (30) is, strictly speaking, infelicitous (or at least misjudged) as a result. Depending what the addressee knows or assumes about the speaker, a number of options are now open to him. If he does not know the speaker well and has no prior beliefs concerning the speaker's romantic attachments, but finds it plausible that someone as good-looking and confident as him should have a girlfriend, then he can accommodate this infelicitous utterance by quietly and without fuss adding this assumption to (what he takes to be) the mutual cognitive environment. Alternatively, he could point out that he was not aware, as the utterance seems to presuppose, that the speaker had a girlfriend. Or he could be inwardly skeptical that the speaker had a girlfriend, and privately contemptuous that he treated this dubious proposition as a MM assumption. Or he could openly assert that the speaker is being deceitful and does not have a girlfriend, and so on. The point is that, under the right circumstances, an utterance of (30) can appear perfectly felicitous even if the assumption that the speaker has a girlfriend is not already MM. This is only possible, however, to the extent that the addressee is willing and able to accommodate by silently adding this assumption to what he takes to be the mutual cognitive environment.[9] More generally, we can say that an addressee will accommodate a non-MM presupposition to the extent that he is willing and able to alter his existing set of assumptions such that the presupposition in question becomes MM. Thus, whether the addressee accommodates (30) will depend on what assumptions, if any, he already has concerning the speaker's romantic attachments. If he has a number of strongly held assumptions that are incompatible with the speaker's having a girlfriend, then the addressee is likely to reject this new assumption and refuse to accommodate (30) (cf. Sperber et al., 2010); and if, for some reason, the addressee has no concept which corresponds to the predicate 'girlfriend', and therefore no assumptions whatsoever relating to such a concept, then he will be unable to accommodate (30).

   Consider in this connection the following scenario. A woman in a pub approaches a man she has never met before, introduces herself, and proceeds to tell him a joke. After delivering the punchline she utters either (31)a or (31)b.

(31)   a. *The Frenchman* always laughs when I tell that joke.
       b. *My dog* always barks when I tell that joke.

Either of these utterances would involve presupposition failure and therefore be infelicitous to at least some extent. But while it is easy to imagine the addressee accommodating (31)b by adding to the mutual cognitive environment the assumption that the speaker has a dog, it is very hard to imagine him accommodating (31)a. We can understand the source of this distinction in terms of the preceding discussion. A *bona fide* utterance of (31)b involves two erroneous assumptions about what is

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[9] If the speaker is being deceitful then this assumption will not, of course, be part of the mutual cognitive environment, but his aims will have been fulfilled by making the addressee believe that it is.

manifest to the addressee. The first is that the speaker owns one dog. The second is that there is a MM P-set in which there is a unique referent for 'the speaker's dog'. The speaker will certainly be able to add the first assumption to the mutual cognitive environment quietly and without fuss, drawing on plausible existing assumptions such as that people often keep dogs as pets, and that owning one dog is also common. Having done so, the second assumption will become true (a possible P-set being, for example, the set of things belonging to the speaker), and the addressee will have accommodated (31)b.

Matters are different in the case of (31)a, however. The definiteness marking in *the Frenchman* carries with it a presupposition that there is a MM P-set in which there is a unique referent of which the predicate 'Frenchman' is true. But in the scenario described there can be no such MM P-set and it is very hard to see what existing assumption(s) the addressee could draw on, and what new assumptions he could add to the mutual cognitive environment, so as to make the appropriate P-set MM. Hence the addressee will be unable to accommodate even if he is willing to (though he can of course nod and smile politely as if the utterance were perfectly felicitous).[10]

Lyons (1999, pp. 263–264) presents examples such as (32), in which there is P-set presupposition failure but we can easily imagine accommodation, as problematic for Hawkins' theory.

(32) [Uttered in a context where the addressee is unaware that the speaker employs a butler]
I'll get *the butler* to show you out.

Utterances such as these are indeed common, and they may well be viewed as entirely felicitous because they are so easily accommodated (along similar lines to (31)b), despite there being no MM P-set containing a unique referent for the definite NP immediately prior to the utterance. But this does not mean that the theory of definiteness presented in (23) and (25) is inadequate. On the contrary, it is only in terms of this theory that we can understand why accommodation is possible in examples such as (32) and (31)b but impossible or very difficult in an apparently similar example such as (31)a.

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[10] This contrast in how readily the examples in (31)a and (31)b can be accommodated has significant consequences for Beaver and Zeevat's (2007) proposals concerning why certain presuppositions cannot be accommodated. These authors note that where the (P-set uniqueness) presupposition associated with a definite description fails, this will often resist accommodation. They suggest that the only exception to this generalization are those definite NPs whose descriptive content alone suffices to single out the intended referent. They go on to generalize further (2007, pp. 530–531) that "we should expect accommodation to be blocked whenever it would conflict with the common ground". But this principle seems to make the false prediction that not only (31)a, but also (31)b, should resist accommodation. Similarly, it leaves us with no basis for explaining why an utterance of (i), in the same context as (31)a,b, should be readily accommodatable, while the apparently similar (31)a is not.

(i)   *The postman* always laughs when I tell that joke.

In line with the discussion above, we can understand the difference here in terms of the addressee's existing set of assumptions, on which he must draw in order to make MM an appropriate P-set. In the case of the concept 'postman', the addressee will most likely already entertain assumptions to the effect that most homes have mail delivered to them by a single individual and that some people might be well enough acquainted with this person to exchange jokes with them. On this basis the addressee merely has to add to the common ground the assumption that the speaker has such a relationship with a single individual who delivers her mail, and it will become MM that there is a unique referent for 'the postman' in the P-set consisting of acquaintances of the speaker.

Lyons is correct, however, in saying that Hawkins himself claims that his theory can directly account for certain uses of definiteness marking which, in reality, involve P-set presupposition failure with accommodation. For instance, Hawkins (1978, p. 132) points to what he calls 'referent-establishing relative clauses' as a supposed subtype of 'unfamiliar' uses of definiteness marking (cf. examples (16)–(17)). He gives the example in (33), and Birner and Ward (1994, p. 93) give the similar example in (34).

(33)   A: What's wrong with Bill?
        B: Oh, *the woman who dated him last night* was nasty to him.
(34)   If you're going into the bedroom, would you mind bringing back *the big bag of potato chips that I left on the bed*?

In both cases we asked to imagine a context in which the addressee is not aware of the existence of the entity referred to by the definite NP in question before the moment of utterance. It seems perfectly plausible that a speaker might utter these sentences in such a context, and that the addressee might accept them without a moment's thought. Nevertheless, if the above discussion is on the right track then these examples involve P-set presupposition failure with accommodation in just the same way as (30)–(32): the definiteness marking in both (33) and (34) indicates that there is a MM P-set in which the referent of each definite NP is unique, but it has been specified that this is not the case – the appropriate P-set is not manifest to the hearer before the moment of utterance. However, all that is required to make the appropriate P-set MM is for the addressee to (quietly and without fuss) adjust the mutual cognitive environment such that it now contains the assumptions that there is a woman who dated Bill last night and that there is a big bag of potato chips on the bed, left there by the speaker. Contrast this with the unaccommodatable (31)a, where the trivial parallel assumption that there is some Frenchman in existence in no way helps to make MM a P-set in which the particular entity referred to in (31)a is unique.

In fact, the argument could be made that even associative anaphoric uses of definite NPs as in (3) (*the car: the exhaust fumes*) involve a degree of accommodation. After all, it is entirely possible for a car not to have any exhaust fumes. Arguably therefore, the assumption that the car referred to in (3) should have exhaust fumes may not be MM, and thus an utterance of (3) could be infelicitous and require the addressee to accommodate by adding this assumption to the mutual cognitive environment after the fact. The point is perhaps clearer if we consider a more marginal case of associative anaphora as in (35).

(35)   I looked at *a house* yesterday. *The jacuzzi* was rather small.

Here it is less likely that the assumption that houses tend to have jacuzzis will ordinarily be part of the mutual cognitive environment of a pair of interlocutors, and therefore more likely that the addressee will have to accommodate accordingly in order for the utterance to succeed.

What we see therefore is that, unsurprisingly, accommodation is a gradient phenomenon, at least when it comes to definite NPs with P-set presupposition failure. At one extreme, there are cases such as (31)a where accommodation is next to impossible and the utterance is highly unlikely to be judged felicitous, because there are no assumptions which the addressee can add to the mutual cognitive environment in order to make MM a P-set in which the referent of the definite NP is unique. In the

middle there are cases such as (27) and (30), where it is evident that there is P-set presupposition failure, but either accommodation is straightforwardly possible (assuming the addressee is willing to accommodate), or it is not required for the speaker's larger rhetorical aims to be fulfilled. At the other extreme there are examples such as (33)–(35) where accommodation is so straightforward that these utterances will most likely be judged felicitous even in case of P-set presupposition failure, or even where the MM-ness of the appropriate P-set is a borderline issue.[11]

The key point is that not only do these accommodation cases not constitute counterexamples to the procedural theory of definiteness defended here, the nature of accommodation to P-set presupposition failure (and its limits) can only be properly understood in terms of this theory.

5 Conclusion

This article has argued, following Hawkins (1978, 1991), that the essence of definiteness is uniqueness within a pragmatically defined set of entities that is mutually manifest to speaker and addressee. I showed how Hawkins' theory can profitably be reformulated in terms of procedural encoding, and that this and other relevance-theoretic concepts can serve to clarify some of the key concepts underlying the theory. Finally, I discussed a class of apparent counterexamples to the theory, which I argued were in fact cases that the theory rightly predicts to be acceptable only if the addressee is willing and able to accommodate.

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[11] Recall in this connection that Sperber & Wilson (1986, pp. 39–42) consider a fact or assumption to be manifest to an individual at a given time iff "he is capable at that time of representing it mentally and accepting its representation as true *or probably true*" [emphasis added].

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